

NEW CLAIMS 1 TO 11

1. Safety system for a roller grinding mill (2) having a milling chamber (3) with a rotary milling surface (5) and milling rollers (6a to 6f) rolling thereon, characterized in that
for continuous availability of at least four milling rollers, more than four milling rollers (6a to 6f) are arranged in pairwise facing manner and in four-roller operation in each case four milling rollers of two milling roller pairs provide approximately 80% of the full milling capacity of roller mill (2).
2. Safety system according to claim 1, characterized in that
six milling rollers (6a 6d; 6b, 6e; 6c, 6f) in pairwise facing manner provide a 3 x 2 roller mill and there is an almost 100% redundancy on the milling roller side for four-roller operation.
3. Safety system according to claim 1 or 2, characterized in that
the milling rollers (6a to 6f) can be swung out pairwise from an operating position into a service position and the roller mill (2) can be operated in four-roller operation with a swung out milling roller pair (6a, 6d or 6b, 6e or 6c, 6f).
4. Safety system according to one of the preceding claims, characterized in that
six milling rollers (6a to 6f) are arranged according to the per se known modular system and in each case a pedestal (9)

and a rocking lever (10) is provided for supporting a milling roller (6a to 6f), as well as a hydropneumatic spring suspension system (11) for a milling roller pair (6a, 6d; 6b, 6e; 6c, 6f) with facing milling rollers (6a, 6d; 6b, 6e; 6c, 6f).

5. Method for operating a roller mill, in which in a milling chamber (3) milling rollers (6a to 6f) roll on a rotary milling surface (5),
characterized in that
for continuous availability of at least four milling rollers, more than four milling rollers (6a to 6f) are arranged in pairwise facing manner and that the milling rollers (6a to 6f) are designed in such away that in four-roller operation 80% of the full milling capacity of roller mill (2) can be provided.
6. Method according to claim 5,
characterized in that
six milling rollers are arranged in pairwise facing manner to give a 3 x 2 roller mill and in the case of breakdowns or damage to the milling rollers (6a to 6f), rocking levers (10) or spring suspension systems (11), the milling rollers of a milling roller pair (6a, 6d or 6b, 6e or 6c, 6f) are swung out from an operating position into a service position.
7. Method according to claim 5 or 6,
characterized in that
in the case of breakdowns or damage to the milling rollers (6a to 6f), rocking levers (10) or spring suspension systems (11) the roller mill is briefly stopped, then one milling roller pair (6a, 6d or 6b, 6e or 6c, 6f) is swung out for repair purposes and subsequently the four milling rollers of the two milling roller pairs (6b, 6e; 6c, 6f or 6a, 6d; 6c,

6f or 6a, 6d; 6b, 6e) remaining in the operating position provide 80% of the full mill capacity.

8. Method for the production of cement in a combined plant, in which in a cement raw material plant cement raw material (23) undergoes mill drying in a roller mill (2) with the aid of milling rollers (6a to 6f) rolling on a rotary milling surface and accompanied by the supply of hot gases, particularly waste gases (12) from a heat exchanger unit (42) and a cooling tower (32), and following classifying and separation of the raw powder (30) from the raw powder-waste gas mixture (19) in a cyclone unit (27) and/or a filter (28) feeding takes place via heat exchanger unit (42) to a precalciner (41) and/or rotary kiln (40), characterized in that
for a milling roller-side, approximately 100% redundancy, more than four milling rollers (6a to 6f) are arranged in pairwise facing manner in the roller mill (2) and that the roller mill (2) is designed in such a way that 80% of the full mill capacity can be provided by in each case four milling rollers (6a, 6d, 6b or 6b, 6e, 6c, 6f or 6a, 6d, 6c, 6f).
9. Method according to claim 8, characterized in that
six milling rollers (6a to 6f) are arranged in pairwise facing manner to give a 3 x 2 roller mill for the mill drying of cement raw material (23).
10. Method according to claim 8 or 9, characterized in that
the six milling rollers (6a to 6f) are arranged according to the per se known modular system, one module being formed in each case by a pedestal (9) with a rocking lever (10), a milling roller (6a to 6f) and a hydropneumatic spring

suspension system (11) and that in the case of a breakdown or damage to a milling roller (6a to 6f), a rocking lever (10) or a hydropneumatic spring suspension system (11) or wearing parts of the milling rollers (6a to 6f), the roller mill (2) is stopped, the rocking lever-milling roller units (10, 6a, 6d) of a milling roller pair are swung out from the operating position into a service position and the roller mill (2) is further operated with the remaining four milling rollers (6b, 6e; 6c, 6f).

11. Method according to claim 10,
characterized in that
the rocking lever-milling roller units (10, 6a, 6d) swung out into the service position are repaired during the four-roller operation of the roller mill (2).